Product Information Sheet for NR-149

Vibrio cholerae, Strain Nanking 32/123

Catalog No. NR-149
(Derived from ATCC® 14730™)

For research use only. Not for human use.

Contributor:
ATCC®

Product Description:
Bacteria Classification: *Vibrionaceae*, *Vibrio*
Species: *Vibrio cholerae*
Strain: Nanking 32/123 (NCTC 4711)
Serogroup: O:2 (non-O1, non-O139)[1]
Original Source: Isolated in 1932 from a case of cholera, Nanking, China[2]
Comments: *Vibrio cholerae* (*V. cholerae*), strain Nanking 32/123 was deposited at ATCC® in 1962 by Dr. Kenneth J. Steel, National Collection of Type Cultures, Central Public Health Laboratory, London, England. Prior to deposition, this strain was hemolytic in sheep red blood cells and showed no agglutination in O group I antiserum.

V. cholerae non-O1, non-O139 strains are generally recognized as less pathogenic than the classical or El Tor biotypes. Most outbreaks are sporadic and localized, therefore lacking any epidemic potential. In 1992 a departure from this trend occurred when a non-O1 serogroup, which later was assigned a new serogroup O139, caused epidemic of cholera-like disease. Since then there has been an escalating interest in non-O1, non-O139 serogroups. Emergence of a newer variant by horizontal gene transfer from O1 to a non-O1 serogroup has been reported, as in the genesis of *V. cholerae* O139. *V. cholerae* non-O1, non-O139 strains possess ToxR, a protein that regulate several virulence factors, and can acquire the toxin-coregulated pilus (TCP) from toxigenic *V. cholerae* O1 by horizontal gene transfer; this is essential for host intestinal colonization and plays an important role in the pathogenesis of cholera.[3,4]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in 0.5X Tryptic Soy Broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
NR-149 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:
Media:
Tryptic Soy Broth or equivalent
Tryptic Soy Agar or equivalent
Incubation:
Temperature: 37°C
Atmosphere: Aerobic
Propagation:
1. Keep vial frozen until ready for use; then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tubes and plate at 37°C for 24 hours.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Vibrio cholerae*, Strain Nanking 32/123, NR-149."

Biosafety Level: 2
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm.

Disclaimers:
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References:

1. Nair, G. B., et al. "Laboratory Diagnosis of *Vibrio cholerae* O139 Bengal, the New Pandemic Strain of Cholera." LabMedica International XI (1994a): 8-11.
2. Gardner, A. D. and K. V. Venkatraman. "The Antigens of the Cholera Group of Vibrios." J. Hyg. 35 (1935): 262-282.
3. Singh, D. V., et al. "Molecular Analysis of *Vibrio cholerae* O1, O139, non-O1, and non-O139 Strains: Clonal Relationships between Clinical and Environmental Isolates." Appl. Environ. Microbiol. 67 (2001): 910-921. PubMed: 11157262.
4. Sharma, C., et al. "Molecular Analysis of Non-O1, Non-O139 *Vibrio cholerae* Associated with an Unusual Upsurge in the Incidence of Cholera-Like Disease in Calcutta, India." J. Clin. Microbiol. 36 (1998): 756-763. PubMed: 9508308.
5. Bik, E. M., R. D. Gouw, and F. R. Mooi. "DNA Fingerprinting of *Vibrio cholerae* Strains with a Novel Insertion Sequence Element: a Tool to Identify Epidemic Strains." J. Clin. Microbiol. 34 (1996): 1453-1461. PubMed: 8735097.
6. Dalsgaard, A., et al. "Ribotypes of Clinical *Vibrio cholerae* non-O1 non-O139 Strains in Relation to O-Serotypes." Epidemiol. Infect. 121 (1998): 535-545. PubMed: 10030702.
7. Shaw, C. "Effect of Blood on the Viability of Dried Cultures of Cholera Vibrios." Nature 178 (1956): 1352-1353. PubMed: 13387712.
8. Gustafsson, B. "Monoclonal Antibody-Based Enzyme-Linked Immunosorbent Assays for Identification and Serotyping of *Vibrio Cholerae* O1." J. Clin. Microbiol. 20 (1984): 1180-1185. PubMed: 6394621.

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